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In re application of:
Dennis L. Montgomery

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For: DATA GATHERING FOR GAMES OF CHANCE

CERTIFICATE OF MAILING

I hereby certify that the below listed papers are being deposited with the United States Postal Service as First Class mail, under 37 C.F.R. §1.8 in an envelope addressed to the Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on January 5, 2006.

By: Bobbie Jutras
Bobbie Jutras

BRIEF ON APPEAL

Mail Stop APPEAL
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This paper is in reply to the Notification of Non-Compliant Appeal Brief mailed December 9, 2005, for which an amended Brief is due January 9, 2006. This paper is filed in triplicate.

The Commissioner is authorized to charge any required fee or to credit any overpayment to Pillsbury Winthrop Shaw Pittman LLP's deposit account no. 03-3975 (order no. 042503-0273332).

REAL PARTY IN INTEREST

The real party in interest is eTreppid Technologies, LLC.

RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences that will directly affect, be directly affected by, or have a bearing on the Board's decision in this appeal.

STATUS OF CLAIMS

Claims 1-31 are pending in the application and stand finally rejected. The final rejections of pending claims 1-31 are appealed.

STATUS OF AMENDMENTS

No amendments were filed subsequent to final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention discloses a method and system that include various patentably distinct embodiments. More specifically, the present invention includes techniques for gathering data and automatically parsing the data to count repetitive actions. *See for example Figure 1 and page 3 paragraph 12.* In a preferred embodiment, a stream of data from a camera is obtained for analysis and the repetitive actions can be counted, though the stream of data can be obtained from other sources. The stream of data, which includes the repetitive actions, can be analyzed in real time or recorded for later analysis. *Id.* By automatically parsing the stream of digital data, the computer can determine the repetitive actions and monitor the repetitive action. Examples of repetitive actions include dealing cards or the action of an object, such as a marble. *See Figures 3, 5b, 5c, and 6.* Once the repetitive action is detected and analyzed, the system can provide event alarms if the step of automatically parsing detects an action that does not correspond to the next sequential or repetitive action.

In one embodiment, the teaching of the present invention can be applied to track the repetitive action of games of chance, such as games that have dealing and playing or games that have marbles or game pieces. More specifically, independent claim 1 is directed at a method of

monitoring a game of chance with repetitive action. *See page 3 paragraph 13.* The method for monitoring the game of chance includes "obtaining a stream of digital image data that includes a plurality of the repetitive actions stored thereon relating to the game of chance and automatically parsing the stream of digital image data to count the plurality of repetitive actions, the count obtained providing an indicator usable to monitor the game of chance." For example, in one embodiment of the present invention the game of chance is blackjack, which includes the action of dealing and playing in corresponding areas of the Table . *See page 3 paragraph 13.* Another example of a repetitive action is roulette, which includes the action of an object such as a marble landing in a slot and that slot corresponding to a position on the table. *See Figure 5a element 500; see also page 6 paragraph 20.* In the embodiment wherein blackjack is the game of chance, a stream of data obtained from a camera filming a table with a player and a dealer place setting is obtained for analysis. *See Figure 3, elements 302-310 and pages 3- 4 paragraph 13.* The stream of data is a stream of digital data and includes the repetitive actions. *See page 4 paragraph 14.* In a preferred embodiment, when monitoring a game with repetitive actions, the computer will compare each of the actions to a corresponding mask to determine and count the repetitive action and determined whether a hand has ended and/or a new hand is about to begin. *See Figure 1 element 115; id. at page 4 paragraphs 15 and 16; see also Figure 4 elements 402 and 404.* If the progress of the game is followed, then the stream of data from the camera is automatically parsed and can be used to provide an indicator, such as an indictor that a hand has been completed and a counter that keeps track of hands being played at the table can be incremented. *See page 4 paragraph 15.*

The teaching of the present invention also includes counting a plurality of objects. As set forth in independent claim 28, the method of counting objects includes "using the counted repetitive sequence that exists to estimate a number of the plurality of objects." In one embodiment of the present invention the number of hands played can be counted. *See page 5 paragraph 19.* In another embodiment, the number of times the table is cleared or the number of times the table is cleared can be determined. *See page 6 and 7 paragraph 23.* In yet another embodiment, the number of times money is laid out during the counting process can be used to determine the total amount of money. *See page 7 paragraph 27.*

In alternative embodiments, other repetitive actions than those described in the preferred embodiment above can be tracked. Independent claim 24 is directed at a method of monitoring repetitive actions. The method according to claim 24 includes "obtaining a stream of digital image data that includes a plurality of the repetitive actions stored thereon and automatically parsing the stream of digital image data to count the plurality of repetitive actions, the count obtained providing an indicator usable to monitor the repetitive action." One example of a repetitive action includes counting money, which is counted in the same manner and each action can be tracked if desired. *See page 7 paragraph 27.* Another example of a repetitive action is the time needed to clean a room; cameras in hallways keep track of the period of time that a laundry cart is in front of a specific room. *See page 8 paragraph 28.* A stream of data, which is digital data and includes the repetitive actions, is obtained and automatically parsed to count and monitor the repetitive action. *See page 7, paragraph 27 and page 8 paragraphs 28 and 29.*

Regardless of the type of application, such as monitoring a game or counting of money, Appellant's invention as claimed is directed at obtaining a stream of digital image data and automatically parsing the digital image data to analyze the repetitive actions. The automatic parsing can occur in real time or at some later time.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-31 stand rejected under 35 USC §102(b) as being anticipated by US Patent No. 5,781,647 to Fishbine et al. (herein "Fishbine").

ARGUMENT

The Examiner's continued rejection of claims 1-31 under 35 USC §102(b) as being anticipated is not supported by the prior art. Appellant asserts that Examiner's rejection based on Fishbine is flawed because Fishbine does not teach each and every element of Appellant's claimed invention.

A. Fishbine does not teach, disclose, or suggest each and every element of independent claims 1 and 24 as well as dependent claims 2-3, 15-18, 20-23, and 25-27.

Fishbine teaches capturing a single image in order to determine chip value representative of a dollar amount for each player while Applicant's invention teaches monitoring repetitive actions through "obtaining a stream of digital image data" including the repetitive actions and "automatically parsing the stream of digital image data to count the" repetitive actions. Fishbine specifically teaches that the operator uses a foot pedal to trigger the system when it "is desired to capture gambling chip pile image . . ." *See col. 5 lines 12-15.* Fishbine does not teach or suggest monitoring repetitive actions to count the repetitive actions.

The Examiner relies upon hindsight to reach an improper assertion. Appellant asserts that manually capturing an image of a chip pile is not same as automatically parsing of a digital data to count the plurality of repetitive actions. While the Examiner agrees with Appellant that the "final outcome of Fishbine is what" the Appellant contends the Examiner goes on to apparently assert that the structure of Fishbine is "the same disclosed structure of" Appellant. *See Office Action date June 10, 2004 at page 3.* This assertion is not supported by the teachings of Fishbine. *Id.* For example, the Examiner states that "because the system is computerized this can be repetitive [*sic*] done and . . . when no chips are present it can be concluded that a round is over." *Id at page 4.* In contrast to the Examiner's assertion, Fishbine does not suggest or teach recording the absence of chips, but rather teaches and requires capturing an image of a gambling chip pile. *See Fishbine col. 3, lines 42-45.* Fishbine goes on to teach that "when it is desired to capture a gambling chip pile image, the operator will actuate a foot pedal or some other control method to place the gambling chip recognition system in capture mode." *See Fishbine col. 5, lines 12-15 (emphasis added).* Once the system is placed in capture mode an image of the chip pile is captured for that moment in time representative of the gambling chip pile and that image is analyzed. *Id.* Thus, according to the teachings of Fishbine, when appropriate, the operator initiates capturing an image of the gambling chip pile. There is no suggestion in Fishbine to support Examiner's assertion that Fishbine teaches "obtaining a stream of digital image data . . . and automatically parsing" that stream.

B. Fishbine does not teach or suggest each and every element of claims 4-12, 14, and 19.

Claims 4-12, 14, and 19 are dependent claims and, thus, in addition to the arguments advanced above, Appellant sets forth additional grounds for the allowance of claims 4-12, 14,

and 19. Fishbine is directed at determining the dollar amount represented by a stack of gambling chips; there is no suggestion in Fishbine that a stream of data is monitored in order to determine the repetitive actions wherein those actions include an action of dealing or the action of an object (such as a marble) as set forth in Appellant's claimed invention.

With respect to dealing, the Examiner's attempt to assert that gambling chip "are similar to playing cards in that the only difference is the flexibility of the medium . . ." further demonstrates Examiner's reliance on hindsight and a failure to appreciated the teaching of Fishbine. With respect to the teachings of Fishbine there are other differences between playing cards and gambling chips. Playing cards and gambling chips have different lengths and the thicknesses. The height or thickness of a chip is much greater than the height or thickness of a playing card and ignoring such a difference demonstrates a lack of understanding for the teaching of Fishbine. Fishbine teaches that there is a relationship between "the height of the chips for a given chip length." *See Fishbine col. 6 lines 23-24.* Therefore, Fishbine relies on the relationship between the height for a given length of a chip in order to determine the chip count. Accordingly, the system of Fishbine would be dramatically impacted if the relationship between the thickness and the height of the object being observed was changed, as would be case when replacing a chip with a playing card. Thus, the system of Fishbine, which depends on the relationship between the thickness and the height as used to determine the variation between pixels in an image, would not operate properly if playing cards were substituted for gambling chips: Fishbine's system would fail because the edge detection algorithm of Fishbine would not be able to determine the boundaries between the objects due to the reduction in the thickness of the object relative to the increase in the length. *See col. 6 Table 4.*

C. Fishbine does not teach or suggest each and every element of claims 13 and 31.

Claims 13 and 31 are dependent claims and, thus, in addition to all of the arguments advanced with respect to the independent claims set forth above, Appellant sets forth additional grounds for the allowance of claims 13 and 31. Fishbine does not teach or suggest the use of an "event alarm if the step of automatically parsing detects placement of a value amount at a location that does not correspond to the next sequential object location." Furthermore, the

Examiner has only provided a general statement rejecting claims 1-31 without specifically pointing out where each and every element of the claimed invention can be found in the prior art.

D. The Examiner has failed to clearly articulate the reason for the rejection and Fishbine does not teach or suggest each and every element of independent claim 28 and dependent claims 29 and 30.

In addition to the Examiner's failure to clearly articulate where each and every element of Appellant's claimed invention is found in the prior art, it is Appellant's position that the Fishbine does not teach or suggest Appellant's claimed invention as set forth in claims 28-30. Appellant incorporates herein the arguments set forth above with respect to independent claims 1 and 24 as well as the following basis for allowance of Appellants independent claim 28. Fishbine teaches analysis of an image of a gambling chip pile. There is no suggestion or disclosure in Fishbine that there is any repetitive action in the captured image; it is simply an image of a gambling chip pile. Furthermore, Fishbine teaches that the pixels within the image are analyzed in order to determine the number of gambling chips in the pile; there is no suggestion in Fishbine that a repetitive sequence is used to estimate the number of objects. In contrast Appellant's claimed invention as set forth in independent claim 28 is related to "using the counted repetitive sequence that exists to estimate a number of the plurality of objects." Thus, Fishbine does not suggest or disclose Appellant's claimed invention.

For the reasons advanced above, Appellant concludes that the rejection of claims 1-31 as being anticipated under 35 USC §102(b) in view of Fishbine is improper.

Accordingly, Appellant respectfully submits that the Examiner's Final Rejection on June 10, 2004 should be reversed and all claims allowed by this Honorable Board.

Respectfully submitted,
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CLAIMS APPENDIX

1. **(Original)** A method of monitoring a game of chance that contains a repetitive action, the method comprising:

obtaining a stream of digital image data that includes a plurality of the repetitive actions stored thereon relating to the game of chance; and

automatically parsing the stream of digital image data to count the plurality of repetitive actions, the count obtained providing an indicator usable to monitor the game of chance.

2. **(Original)** The method of claim 1, wherein the step of automatically parsing the stream performs pattern recognition on fixed locations.

3. **(Original)** The method of claim 1, wherein the step of obtaining the stream of digital image data uses a video camera fixed in position that does not zoom.

4. **(Previously Presented)** The method of claim 1, wherein the repetitive action includes an action of dealing.

5. **(Previously Presented)** The method of claim 4, wherein the repetitive action of dealing corresponds to an area of the table where the dealing occurs.

6. **(Previously Presented)** The method of claim 1, wherein the repetitive action includes an action of playing.

7. **(Previously Presented)** The method of claim 6, wherein the repetitive action of playing corresponds to an area of the table where the bet is placed.

8. **(Previously Presented)** The method of claim 6, wherein the repetitive action of playing corresponds to an area of the table where at least one game piece is placed.

9. **(Previously Presented)** The method of claim 1, wherein the repetitive action includes actions of both dealing and playing.

10. **(Original)** The method of claim 1, wherein the repetitive action includes an action of an object.

11. **(Previously Presented)** The method of claim 10, wherein the repetitive action of the object is a landing of a marble in a slot of a wheel in a game of roulette.

12. **(Original)** The method of claim 11 further including the step of comparing a slot where the marble lands with a placement of a marker on a table position.

13. **(Original)** The method of claim 12 further including the step of triggering an event alarm if the slot where the marble landed and the table position where the marker was placed do not correspond to each other.

14. **(Original)** The method of claim 10 the repetitive action of the object is the marble being located at an inner edge portion of a wheel in a game of roulette.

15. **(Original)** The method of claim 1, wherein the game of chance is a card game.

16. **(Original)** The method of claim 15, wherein the repetitive action is an absence of cards at a predetermined location of a table.

17. **(Original)** The method of claim 15, wherein the repetitive action is an existence of objects at a predetermined location of a table.

18. **(Previously Presented)** The method of claim 15, wherein the card game is one of blackjack, pai-gow, 3 card poker, and baccarat.

19. **(Previously Presented)** The method of claim 15, wherein the repetitive actions are sequential acts based on sequence of actions in accordance with the rules of the card game.

20. **(Original)** The method of claim 15, further including the step of comparing a color of a card against a color of a deck being dealt to assist in ensuring that the card is a legitimate card.

21. **(Original)** The method of claim 1, wherein the step of automatically parsing uses a mask to compare a scene corresponding to a location on a frame with the mask.

22. **(Previously Presented)** The method of claim 21, wherein the scene corresponds to an area of a table where cards are placed.

23. **(Previously Presented)** The method of claim 21, wherein the scene corresponds to an area of a table where bets are placed.

24. **(Original)** A method of monitoring a repetitive action, the method comprising:

obtaining a stream of digital image data that includes a plurality of the repetitive actions stored thereon; and

automatically parsing the stream of digital image data to count the plurality of repetitive actions, the count obtained providing an indicator usable to monitor the repetitive action.

25. **(Previously Presented)** The method of claim 24 wherein the step of automatically parsing the stream performs pattern recognition on fixed locations of frames.

26. **(Previously Presented)** The method of claim 24 wherein the stream of digital image data includes a plurality of frames, and a portion of each frame is compared to a mask.

27. **(Previously Presented)** The method of claim 24 wherein adjacent frames that both contain the portion that corresponds to the mask do not indicate a repetitive action.

28. **(Original)** A method of counting a plurality of objects comprising:

obtaining a stream of digital image data that includes therein a repetitive sequence that exists with respect to the plurality of objects; and

automatically parsing the stream of digital image data to count the repetitive sequence that exists; and

using the counted repetitive sequence that exists to estimate a number of the plurality of objects.

29. **(Previously Presented)** The method of claim 28, wherein the plurality of objects include a plurality of vertically stacked chips separated by a spacer at repetitive intervals and the step of automatically parsing counts each different spacer.

30. **(Previously Presented)** The method of claim 28 wherein the plurality of objects include a plurality of object locations, wherein a predetermined value amount is placed at each object location, and wherein the step of automatically parsing counts each placement of another predetermined value amount at another sequential object location.

31. **(Original)** The method of claim 30 further including the step of triggering an event alarm if the step of automatically parsing detects placement of a value amount at a location that does not correspond to the next sequential object location.

EVIDENCE APPENDIX

RELATED PROCEEDINGS APPENDIX